

manners in the VR space. For example, if the virtual object represents a laser pointer, the user can manipulate the computing device as if it were an actual laser pointer. The user can move the computing device left and right, up and down, in a circle, etc., and use the device in a similar fashion to using a laser pointer.

[0088] In some implementations, one or more input devices included on, or connect to, the computing device **2050** can be used as input to the VR space. The input devices can include, but are not limited to, a touchscreen, a keyboard, one or more buttons, a trackpad, a touchpad, a pointing device, a mouse, a trackball, a joystick, a camera, a microphone, earphones or buds with input functionality, a gaming controller, or other connectable input device. A user interacting with an input device included on the computing device **2050** when the computing device is incorporated into the VR space can cause a particular action to occur in the VR space.

[0089] In some implementations, a touchscreen of the computing device **2050** can be rendered as a touchpad in VR space. A user can interact with the touchscreen of the computing device **2050**. The interactions are rendered, in VR headset **2090** for example, as movements on the rendered touchpad in the VR space. The rendered movements can control virtual objects in the VR space.

[0090] In some implementations, one or more output devices included on the computing device **2050** can provide output and/or feedback to a user of the VR headset **2090** in the VR space. The output and feedback can be visual, tactical, or audio. The output and/or feedback can include, but is not limited to, vibrations, turning on and off or blinking and/or flashing of one or more lights or strobes, sounding an alarm, playing a chime, playing a song, and playing of an audio file. The output devices can include, but are not limited to, vibration motors, vibration coils, piezo-electric devices, electrostatic devices, light emitting diodes (LEDs), strobes, and speakers.

[0091] In some implementations, the computing device **2050** may appear as another object in a computer-generated, 3D environment. Interactions by the user with the computing device **2050** (e.g., rotating, shaking, touching a touchscreen, swiping a finger across a touch screen) can be interpreted as interactions with the object in the VR space. In the example of the laser pointer in a VR space, the computing device **2050** appears as a virtual laser pointer in the computer-generated, 3D environment. As the user manipulates the computing device **2050**, the user in the VR space sees movement of the laser pointer. The user receives feedback from interactions with the computing device **2050** in the VR environment on the computing device **2050** or on the VR headset **2090**.

[0092] In some implementations, a computing device **2050** may include a touchscreen. For example, a user can interact with the touchscreen in a particular manner that can mimic what happens on the touchscreen with what happens in the VR space. For example, a user may use a pinching-type motion to zoom content displayed on the touchscreen. This pinching-type motion on the touchscreen can cause information provided in the VR space to be zoomed. In another example, the computing device may be rendered as a virtual book in a computer-generated, 3D environment. In the VR space, the pages of the book can be displayed in the VR space and the swiping of a finger of the user across the touchscreen can be interpreted as turning/flipping a page of

the virtual book. As each page is turned/flipped, in addition to seeing the page contents change, the user may be provided with audio feedback, such as the sound of the turning of a page in a book.

[0093] In some implementations, one or more input devices in addition to the computing device (e.g., a mouse, a keyboard) can be rendered in a computer-generated, 3D environment. The rendered input devices (e.g., the rendered mouse, the rendered keyboard) can be used as rendered in the VR space to control objects in the VR space.

[0094] Computing device **2000** is intended to represent various forms of digital computers and devices, including, but not limited to laptops, desktops, workstations, personal digital assistants, servers, blade servers, mainframes, and other appropriate computers. Computing device **2050** is intended to represent various forms of mobile devices, such as personal digital assistants, cellular telephones, smart phones, and other similar computing devices. The components shown here, their connections and relationships, and their functions, are meant to be exemplary only, and are not meant to limit implementations of the inventions described and/or claimed in this document.

[0095] A number of embodiments have been described. Nevertheless, it will be understood that various modifications may be made without departing from the spirit and scope of the specification.

[0096] In addition, the logic flows depicted in the figures do not require the particular order shown, or sequential order, to achieve desirable results. In addition, other steps may be provided, or steps may be eliminated, from the described flows, and other components may be added to, or removed from, the described systems. Accordingly, other embodiments are within the scope of the following claims.

What is claimed is:

1. A motorized shoe assembly, comprising:

- a platform;
- a flex region provided on a bottom surface portion of the platform, the platform being configured to flex at the flex region through a range of flexure, between a neutral state and a fully flexed state;
- a locomotion device coupled to the bottom surface portion of the platform, including:
 - a plurality of wheels; and
 - at least one belt coupled to the plurality of wheels, the plurality of wheels configured to guide movement of the at least one belt;
- a motor coupled to the platform and selectively providing power to the locomotion device to selectively operate the locomotion device; and
- a linkage assembly coupled to the bottom surface portion of the platform, and coupled to the locomotion device, the linkage assembly being configured to maintain a target amount of tension on the at least one belt through the range of flexure of the platform.

2. The motorized shoe assembly of claim 1, wherein the locomotion device includes:

- a first plurality of wheels arranged along a first lateral side of the linkage assembly on the bottom surface portion of the platform;
- a first belt coupled to the first plurality of wheels, wherein the first plurality of wheels guide movement of the first belt;